CLAIMS

What is claimed is:

1. A magnetic head, comprising:

a seed layer structure comprising Al_2O_3, Ta, and NiFeCr seed layers;

an antiparallel (AP) pinned layer structure formed above the NiFeCr seed layer; and

a free layer positioned above the AP pinned layer structure.

2. A head as recited in claim 1, wherein the AP pinned layer structure includes at least two pinned layers having magnetic moments that are self-pinned antiparallel to each other, the pinned layers being separated by an AP coupling layer.

3. A head as recited in claim 2, wherein the AP pinned layers are constructed of CoFe and Co.

4. A head as recited in claim 3, wherein the pinned layer closest to the seed layer structure includes CoFe.

5. A head as recited in claim 2, wherein the AP pinned layers are both constructed of Co.

6. A head as recited in claim 2, wherein the AP pinned layers are both constructed of CoFe.

7. A head as recited in claim 2, wherein the AP pinned layers are constructed of materials selected to maximize a magnetostriction of the AP pinned layers.

8. A head as recited in claim 1, wherein a thickness of the NiFeCr seed layer is selected to maximize a GMR signal.

9. A head as recited in claim 1, wherein the head has at least a 10% stronger GMR signal over a head having a substantially similar structure except for the seed layers.

10. A head as recited in claim 1, wherein the head has at least a 10% stronger GMR signal over a head having a substantially similar structure except for materials used to form the pinned layers.

11. A head as recited in claim 1, wherein the head forms part of a GMR head.

12. A head as recited in claim 1, wherein the head forms part of a CIP GMR sensor.

13. A magnetic head, comprising:

a seed layer structure comprising Al_2O_3, Ta, and NiFeCr seed layers;

an antiparallel (AP) pinned layer structure formed above the NiFeCr seed layer,

wherein the AP pinned layers are constructed of CoFe and Co, wherein the pinned layer closest to the seed layer structure includes CoFe; and

a free layer positioned above the AP pinned layer structure.

14. A head as recited in claim 13, wherein the head has at least a 10% stronger GMR signal over a head having a substantially similar structure except for the seed layers.

15. A head as recited in claim 13, wherein the head has at least a 10% stronger GMR signal over a head having a substantially similar structure except for materials used to form the pinned layers.

16. A head as recited in claim 13, wherein the head forms part of a GMR head.

17. A magnetic head, comprising:

a seed layer structure comprising Al_2O_3, Ta, and NiFeCr seed layers;

an antiparallel (AP) pinned layer structure formed above the NiFeCr seed layer,

wherein the AP pinned layers are constructed of Co and Co; and

a free layer positioned above the AP pinned layer structure.

18. A head as recited in claim 18, wherein the head has at least a 10% higher positive magnetostriction over a head having a substantially similar structure except for the seed layers.

19. A magnetic storage system, comprising:

magnetic media;

at least one head for reading from and writing to the magnetic media, each head having:

a sensor having the structure recited in claim 1;

a write element coupled to the sensor;

a slider for supporting the head; and

a control unit coupled to the head for controlling operation of the head.